

## CLAIMS

What is claimed is:

1. A catheter insertion sheath comprising:
  - a tubular sheath having a proximal end, a distal end, and a hollow passage extending between the proximal end and the distal end;
  - a handle portion disposed at the proximal end of the tubular sheath;
  - and
  - means extending from the handle portion for releasably closing the sheath, wherein the means are movable between an open position and a closed position, wherein, when the means are in the open position, fluid may flow through the hollow passage between the proximal end and the distal end and when the means are in the closed position, fluid flow is restricted through the hollow passage between the proximal end and the distal end.
2. The catheter insertion sheath according to claim 1, wherein the means are operable with a single hand.
3. A catheter insertion sheath comprising:
  - a flexible elongated body having a proximal end, a distal end, a longitudinal axis extending therethrough;
  - a handle connected to the proximal end of the body; and

a pinching means for pinching the body closed, wherein the pinching means extends from the handle and wherein the pinching means is operable between an open position and a closed position.

4. The catheter insertion sheath according to claim 3, wherein the pinching means comprises a first portion disposed generally on one side of the longitudinal axis and a second portion, similar to the first portion, disposed generally on an opposing side of the longitudinal axis.
5. The catheter insertion sheath according to claim 4, wherein the first portion comprises a first tab and the second portion comprises a first recess, and wherein, when the pinching member is in the closed position, the first tab engages the first recess.
6. The catheter insertion sheath according to claim 5, further comprising the second portion having a second tab and the first portion having a second recess, and wherein, when the pinching member is in the closed position, the second tab engages the second recess.
7. The catheter insertion sheath according to claim 3, wherein the pinching means is hingedly connected to the handle.
8. The catheter insertion sheath according to claim 3, wherein the pinching means is operable with one hand.
9. The catheter insertion sheath according to claim 3, wherein the means comprises:

a body having a first end connected to the sheath handle and a second end having a slot extending through the body; and

a generally planar pinch member slidably disposed within the slot between an open position and a pinching position, wherein the pinch member includes a first pinch leg having a first tapered free end and a first connected end and a second pinch leg juxtaposed from the first pinch leg, wherein the second pinch leg has a second tapered free end and a second connected end connected to the first connected end, and wherein the pinch member is slidable within the slot between a first position wherein the first and second tapered free ends are proximate to the slot and a second position wherein the first and second connected ends are proximate to the slot.

10. The catheter insertion sheath according to claim 9, wherein the body is generally elongated.
11. The catheter insertion sheath according to claim 9, wherein the first pinch leg comprises a first rib disposed toward the second pinch leg and wherein the second pinch leg comprises a second rib disposed toward the first pinch leg.
12. The catheter insertion sheath according to claim 9, wherein, when the first and second tapered free ends are proximate to the slot, the body is in an open position and when the first and second connected ends are proximate to the slot, the body is in a closed position.
13. A catheter insertion sheath assembly comprising:  
  
a catheter sheath including a generally tubular sheath body having a proximal end and a distal end;

a handle fixedly connected to the proximal end of the sheath body; and  
a catheter sheath clamp comprising:

a body having a first end connected to the sheath handle and a  
second end having a slot extending through the body; and

a generally planar pinch member slidably disposed within the slot  
between an open position and a pinching position, wherein the pinch  
member includes a first pinch leg having a first tapered free end and a first  
connected end and a second pinch leg juxtaposed from the first pinch leg,  
wherein the second pinch leg has a second tapered free end and a second  
connected end connected to the first connected end, and wherein the pinch  
member is slidable within the slot between a first position wherein the first  
and second tapered free ends are proximate to the slot and a second  
position wherein the first and second connected ends are proximate to the  
slot.

14. The catheter insertion sheath assembly according to claim 13, wherein the body is generally elongated.
15. The catheter insertion sheath assembly according to claim 13, wherein the first pinch leg comprises a first rib disposed toward the second pinch leg and wherein the second pinch leg comprises a second rib disposed toward the first pinch leg.
16. A method of operating a pinch clamp for releasably pinching off fluid flow through a catheter insertion sheath, comprising:

providing a clamp over a catheter insertion sheath, wherein the catheter insertion sheath includes a longitudinal axis extending therethrough;

using a thumb on one hand to bias a first engagement portion of the clamp toward the longitudinal axis; and

using at least one finger on the hand to bias a second engagement portion of the clamp toward the longitudinal axis,

such that the first engagement portion releasably engages the second engagement portion and the flexible conduit is pinched off by the first engagement portion and the second engagement portion.

17. The method according to claim 16, further comprising, after pinching off the catheter insertion sheath:

using the thumb to bias a locking leg on the first engagement portion away from the first engagement portion ; and

using the at least one finger to bias a locking leg on the second engagement portion away from the second engagement portion,  
such that the first engagement portion disengages from the second engagement portion and fluid is flowable through the catheter insertion sheath.

18. A method of inserting a catheter into a catheter sheath, wherein the catheter sheath comprises a proximal end, a distal and a sheath clamp disposed proximate to the proximate end, the method comprising:

inserting a catheter sheath into a blood vessel of a patient;

securing the sheath clamp to the sheath to restrict fluid flow between the proximate end and the distal end of the sheath;

inserting a catheter into the proximal end of the sheath and advancing the catheter toward the sheath clamp;

releasing the sheath clamp from the sheath;

advancing the catheter through the sheath to the distal end of the sheath;

and

removing the sheath from the blood vessel.

19. The method according to claim 18, wherein securing the sheath clamp further comprises securing the sheath clamp using one hand.
20. The method according to claim 18, wherein releasing the sheath clamp comprises releasing the sheath clamp with one hand.
21. The method according to claim 18, wherein providing the sheath clamp comprises:

providing the sheath clamp including:

an elongated extension body having a first end connected to the sheath handle and a second end having a slot extending through the body; and

a generally planar pinch member slidably disposed within the slot between an open position and a pinching position, wherein the pinch member includes a first pinch leg having a first tapered free end and a first connected end and a second pinch leg

juxtaposed from the first pinch leg, wherein the second pinch leg has a second tapered free end and a second connected end connected to the first connected end, and wherein the pinch member is slidable within the slot between a first position wherein the first and second tapered free ends are proximate to the slot and a second position wherein the first and second connected ends are proximate to the slot, and wherein securing the sheath clamp comprises sliding the pinch member from the first position to the second position.

22. The method according to claim 21, wherein releasing the clamp comprises sliding the pinch member from the second position to the first position.
23. The method according to claim 18, wherein removing the sheath comprises tearing the sheath from around the catheter.
24. The method according to claim 21, wherein providing the sheath clamp further comprises providing the first pinch leg having a first rib extending toward the second pinch leg and providing the second pinch leg having a second rib extending toward the first pinch leg.